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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,619	07/25/2001	Tetsuo Taniguchi	XA-8024E	4934

7590

01/29/2003

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,619

Applicant(s)

TANIGUCHI, TETSUO

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/185,101.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

In response to applicant's Amendment, dated November 19, 2002, the examiner acknowledges the correction of the objection to the Specification set forth in the Office Action mailed July 19, 2002.

The amendments to claims 4 and 9 have addressed all the 35 U.S.C. 112 rejections set forth in the Office Action mailed July 19, 2002.

Regarding the 35 U.S.C. 102(b) rejection of claims 1-16 as being anticipated by Kamiya, et al. (US 4,853,745), the applicant makes the argument that in Kamiya the "movement of a stage is used to position a mark in an alignment process, but there is no scanning exposure apparatus or method in which both a mask and a substrate are moved to perform a scanning exposure. The examiner has considered the applicant's arguments in light of the amended claims and withdraws the rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Torigoe (US 4,822,975).

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Torigoe discloses all the structure set forth in the claims. Regarding claims 1-3, 8 and 13-16, Torigoe discloses "...a beam source (Fig. 2A, ref.# 2) which emits pulses of an exposure beam in response to trigger signals (column 7, lines 20-23) output at predetermined time intervals; a projection system (Fig. 2A, ref.# 5) disposed in a path of exposure beam from the beam source and which projects an image of a pattern formed on a mask (Fig. 2A, ref.# M) onto the substrate (Fig. 2A, ref.# W), the mask to be disposed on one side of the projection system and the substrate to be disposed on another side thereof; a stage (column 3, lines 26-27) disposed on the one side or the other side of the projection system and which is movable in a scanning direction while holding the mask or the substrate, respectively; and an interferometer (column 6, lines 46-52) connected to the stage and which outputs a measurement value (column 6, line 43-45) corresponding to positional information of the stage in the scanning direction; wherein control of the laser (i.e., a "start timing" and "stop timing") "...is controlled based on the measurement value from the interferometer (column 7, lines 18-25)."

Regarding claims 4 and 9, Torigoe discloses the use of a pulsed excimer laser which can inherently emit "...pulses of the exposure beam at a rated maximum frequency."

Regarding claims 4-7 and 9-12, it is inherent in any scanning optical system used in photolithography that the exposure amount may be adjusted by adjusting the scanning speed, intensity of the pulses, or adjusting the width of the beam.

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Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

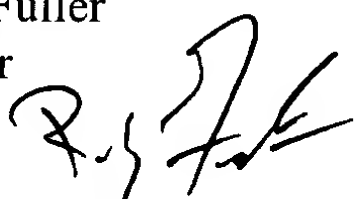
4. Claims 17-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in claims 17 and 20 of "rotating an optical member disposed in the path of the exposure beam" is not disclosed in the specification or drawings (i.e., new matter). The limitation in claims 19 and 22 of "a field stop" is not disclosed in the specification or drawings (i.e., new matter). Claims 18 and 19 depend from claim 17 and therefore include the deficiencies of claim 17. Claims 21 and 22 depend from claim 20 and therefore include the deficiencies of claim 20.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Examiner



January 28, 2003